

### Standard Bourdon Tube Process Pressure Gauges

These process quality pressure gauges all feature a fully serviceable design with replaceable parts, backed by factory service to provide minimum lifetime cost.

Calibration is done against primary standards maintained traceable to South African National Standards.

Tubes are recessed into the block for extra strength, and end-caps are standard to minimize stress concentrations.

**Specification:**

**Accuracy:** 1,6% FSD on 63mm ,  
1% on larger sizes.

**Bezel:** Bayonet.

**Dial:** Black figures on white background, fine graduations.

**Window:** plain glass, minimum 3mm thick, optional laminated safety glass, except on 100mm polycarbonate case which has a moulded PC window.

**Pointer:** Black aluminium

**Movement:** 304 stainless steel, (brass on series 52), fully adjustable.



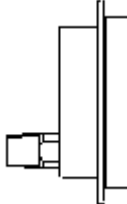
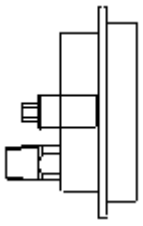
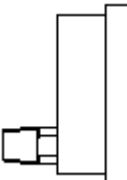
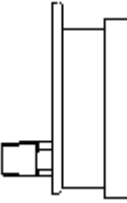
**Seals:** Nitrile, except Viton used on PC case window seal.

**Temperature Limit:** 60°C



Our **Vibragauge®** build variant is designed to handle high vibration applications, using inlet restrictors, damped movements, and other features. It has proven very successful on its own in applications where glycerine is not permitted, e.g. oxygen, chlorine, peroxide, or not preferred, e.g. frequent calibration applications, yet can be combined with glycerine filling for double protection in severe applications.

<b>Table 1</b>  <b>Series Type</b>	<b>63</b>	-			-			-			-							
	Description															Code		
	Pressure gauge with bronze tube, brass block and brass movement															52		
	<b>Pressure gauge with 316 stainless steel tube and block, and 304 stainless steel movement</b>															<b>63</b>		
Pressure gauge with Monel 400 tube and block, and 304 stainless steel movement															103			

<b>Table 2</b>  <b>Instrument Mounting</b>	<b>63</b>	<b>2</b>	-			-			-			-						
	Description															Code		
	<b>Direct mounting, bottom entry</b>															<b>2</b>		
	Direct mounting, rear entry															5		
	Surface mounting, back flange, bottom entry															1		
	Surface mounting, back flange, rear entry															7		
	Panel mounting, front flange, screw fix, rear entry															3		
	Panel mounting, front Flange, U-clamp fix, rear entry															4		
<b>Type 1</b>			<b>Type 2</b>						<b>Type 3</b>									
																		
<b>Type 4</b>			<b>Type 5</b>						<b>Type 7</b>									
																		

<b>Table 3</b>  <b>Dial Size</b>	<b>63</b>	<b>2</b>	-	<b>1</b>	<b>0</b>	<b>0</b>	-			-			-					
	Description															Code		
	63mm (2½")															063		
	<b>100mm (4")</b>															<b>100</b>		
	115mm (4½")															115		
	150mm (6")															150		
	160mm															160		
250mm (10")															250			

<b>Table 4</b>  <b>Build</b>	<b>63</b>	<b>2</b>	<b>-</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>V</b>										
	<b>Description</b>													<b>Code</b>				
	Standard													S				
<b>Vibragauge®</b>													<b>V</b>					

<b>Table 5</b>  <b>Pointer</b>	<b>63</b>	<b>2</b>	<b>-</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>V</b>	<b>F</b>									
	<b>Description</b>													<b>Code</b>				
	<b>Fixed</b>													<b>F</b>				
Micro-Adjustable													A					

<b>Table 6</b>  <b>Case Material</b>	<b>63</b>	<b>2</b>	<b>-</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>V</b>	<b>F</b>	<b>-</b>	<b>4</b>							
	<b>Description</b>													<b>Code</b>				
	<b>304 stainless steel (default)</b>													<b>4</b>				
	316 stainless steel (expensive extra)													6				
	Polycarbonate, 100mm bottom entry, arctic blue													B				
	Polycarbonate, 100mm bottom entry, golden brown													C				
	Polycarbonate, 100mm bottom entry, brilliant green													G				
	Polycarbonate, 100mm bottom entry, pastel grey													H				
	Polycarbonate, 100mm bottom entry, jacaranda													J				
	Polycarbonate, 100mm bottom entry, signal red													R				
	Polycarbonate, 100mm bottom entry, light stone													S				
Polycarbonate, 100mm bottom entry, canary yellow													Y					

<b>Table 7</b>  <b>Case Fill</b>	<b>63</b>	<b>2</b>	<b>-</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>V</b>	<b>F</b>	<b>-</b>	<b>4</b>	<b>0</b>						
	<b>Description</b>													<b>Code</b>				
	Not fillable													X				
	<b>Fillable but unfilled</b>													<b>0</b>				
	Glycerine filled													1				
Silicone oil filled (DC200)													2					

<b>Table 8</b>  <b>Thread Type</b>	<b>63</b>	<b>2</b>	<b>-</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>V</b>	<b>F</b>	<b>-</b>	<b>4</b>	<b>0</b>	<b>-</b>	<b>R</b>				
	<b>Description</b>													<b>Code</b>				
	BSP Parallel (ISO228/1 – G)													B				
	NPT													N				
<b>BSP Taper (ISO 7/1– R)</b>													<b>R</b>					

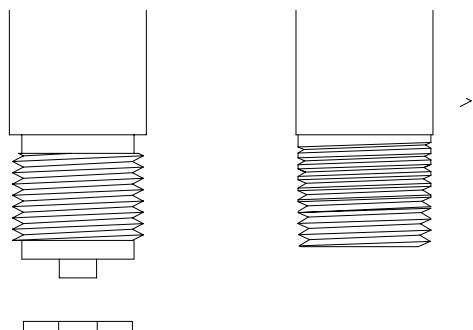
<b>Table 9</b>  <b>Thread Size</b>  NB Maximum in 63mm dial is ¼", and ½" in larger sizes.	<b>63</b>	<b>2</b>	<b>-</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>V</b>	<b>F</b>	<b>-</b>	<b>4</b>	<b>0</b>	<b>-</b>	<b>R</b>	<b>4</b>			
	<b>Description</b>													<b>Code</b>				
	1/8" (6mm)													1				
	1/4" (8mm)													2				
	3/8" (10mm)													3				
<b>1/2" (15mm)</b>													<b>4</b>					

<b>Table 10</b>  <b>Options</b>	<b>63</b>	<b>2</b>	<b>-</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>V</b>	<b>F</b>	<b>-</b>	<b>4</b>	<b>0</b>	<b>-</b>	<b>R</b>	<b>4</b>			
	<b>Description</b>													<b>Code</b>				
Where a gauge is required other than as selected above, specify your requirements, and use the X code													X					

## Threads for Instrument Connections

One of the least understood parts of instrument specifications is the connection thread. Misguided metrication also plays its part.

The two commonest thread types provided by instrument manufacturers, are the BSP parallel thread, and the NPT taper thread. Pipe fittings provided in the field are most commonly BSPT in South Africa



Parallel  
Thread  
Uses  
Sealing  
Washer

Taper  
Thread  
Uses  
Thread  
Tape

Most, but not all, European instrument threads are BSP parallel. These threads are designed for sealing on a flat washer under the thread. The modern specification for these threads is ISO228/1, previously BS2779, and they are referred to as G $\frac{1}{4}$ , G $\frac{1}{2}$  etc. External threads are available with two tolerance classes, A and B. If not stated, B is assumed.

Parallel threads are meant to be sealed using a flat washer, as shown left. If thread tape is to be used, order a taper thread. Most industrial pipe fittings used in South Africa are BSPT, SABS 1109. These threads were originally made to BS21, superseded by ISO 7/1, and now used with the Prefix R. These threads are designed for sealing on the threads using thread tape or other sealant.

**BSPT and NPT threads.** These thread types are mostly not compatible. Most instrument taper threads are NPT. As a rough guide to thread identification, the basic attributes are listed below:

Nominal Bore	O.D. mm	Threads per inch (TPI)		
		BSP Parallel (G)	BSP Taper (R)	NPT Taper
1/8" – 6mm	~10	28	28	27
1/4" – 8mm	~14	19	19	18
3/8" – 10mm	~17	19	19	18
1/2" – 15mm	~21	14	14	14
3/4" – 20 mm	~27	14	14	14
1" – 25mm	~33	11	11	11 1/2

### Dials:

Dials follow SABS 1062 recommendations, and feature fine graduations for optimum resolution.

Range	Divisions	Typical Weights (kg)		
		Size	Dry	Filled
1; 10; 100; 1 000	100	63 mm	0,2	0,25
1,6; 16; 160; 1 600	80	100 mm	0,6	0,9
2,5; 25; 250; 2 500	125	150 mm	1,1	2,0
4; 40; 400; 4 000	80	(With glycerine)		
6; 60; 600; 6 000	120	(With glycerine)		

### Manufactured by

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